

**B. Amendments to the Claims**

Please amend the claims where indicated:

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1. (currently amended) An isolated polynucleotide ~~comprising a polynucleotide~~ from a strain of *Chlamydia* selected from the group consisting of:
- (a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO:1; and
  - (b) ~~a polynucleotide encoding a polypeptide having a sequence that is at least 75% homologous to SEQ ID NO:2; and~~
  - (c) a polynucleotide which hybridizes under stringent hybridizing conditions of 6xSSC containing 50% formamide at 42°C with a polynucleotide that has a complementary sequence to SEQ ID NO:1,
- wherein said isolated polynucleotide, when administered in an immunogenically-effective amount to a mammal, induces an immune response in ~~by~~ said mammal against said strain of *Chlamydia*.
2. (previously amended) The polynucleotide of claim 1, linked to a second nucleotide sequence encoding a fusion polypeptide.
3. (previously amended) The polynucleotide of claim 2 wherein the fusion polypeptide is a heterologous signal peptide.
4. (currently amended) The nucleotide of claim 2 wherein the polynucleotide encodes a ~~functional fragment of the polypeptide~~ comprising the amino acid sequence of having the SEQ ID NO: 2.

Claims 5-9 (canceled)

10. (originally presented) An expression cassette, comprising the polynucleotide of claim 1 operably linked to a promoter.

11. (originally presented) An expression vector, comprising the expression cassette of claim 10.
12. (originally presented) A host cell, comprising the expression cassette of claim 10.
13. (currently amended) The host cell of claim 12 ~~10~~, wherein said host cell is a prokaryotic cell.
14. (previously amended) The host cell of claim 12, wherein said host cell is a eukaryotic cell.

Claim 15 (canceled)

16. (previously amended) A vaccine vector, comprising the expression cassette of claim 10.

Claim 17 (canceled)

18. (previously amended) The vaccine vector of claim 16, wherein said vector is in a pharmaceutically acceptable excipient.
19. (previously amended) A pharmaceutical composition, comprising an immunologically effective amount of the vaccine vector of claim 16.

Claims 20-24 (canceled)

25. (previously amended) A polynucleotide probe reagent that detects the presence of *Chlamydia* in a biological material, comprising a polynucleotide that hybridizes with the polynucleotide of claim 1 under stringent hybridizing conditions of 6xSSC containing 50% formamide at 42°C.
26. The polynucleotide probe reagent of claim 25, wherein said reagent is a DNA primer.

Claims 27-37 (canceled)

38. (originally presented) The host cell of claim 14, wherein said eukaryotic cell is a mammalian cell.
39. (originally presented) The host cell of claim 38, wherein said mammalian cell is a human cell.

Claims 40-41 (canceled)

42. (previously added) The vaccine vector of claim 16, wherein said vector is a viral live vaccine vector or a bacterial live vaccine vector.
43. (previously added) The vaccine vector of claim 42, wherein said viral live vaccine vector is selected from the group consisting of: adenoviruses, alphavirus, and poxviruses.
44. (previously added) The vaccine vector of claim 42, wherein said bacterial live vaccine vector is selected from the group consisting of: *Shigella*, *Salmonella*, *Vibrio cholerae*, *Lactobacillus*, Bacille bilié de Calmette-Guérin, and *Streptococcus*.